

Appl. No. 09/784,822
Amdt. Dated September 14, 2004
Reply to Office action of June 15, 2004
Attorney Docket No. P12683/27943-00397USP1
EUS/J/P/04-8214

REMARKS/ARGUMENTS

1.) Claim Amendments

The Applicant has amended Claims 1, 4, 11 and 18; Claim 10 has been cancelled. Applicant respectfully submits no new matter has been added. Accordingly, Claims 1-9 and 11-28 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

2.) Examiner Objections – Specification

The Examiner objected to the specification because of several informalities. The Applicant thanks the Examiner for his careful review of the specification. In response, the Applicant has modified the specification as suggested by the Examiner. The Examiner's consideration of the amendments to the Specification is respectfully requested.

3.) Examiner Objections - Claims

The Examiner objected to Claim 4 because of informalities. Again, the Applicant appreciates the Examiner's thorough review of the claims. The Applicant has amended the claims as suggested by the Examiner in order to correct the informalities. The Examiner's consideration of the amended claims is respectfully requested.

4.) Claim Rejections – 35 U.S.C. § 102(e)

The Examiner rejected claims 1-3, 5, 7 and 10 under 35 U.S.C. § 102(e) as being anticipated by Christie et al. (US 6,535,483). The Applicant respectfully traverses the Examiner's rejection and has further amended independent Claims 1, 11, and 18 to better define the intended scope of the present invention. Additionally, in order to reduce the number of independent claims, the Applicant has cancelled independent Claim 10 without prejudice. In view of the above amendments and the following remarks, a favorable reconsideration of the now pending claims is respectfully requested.

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As fully disclosed in the present application, as broadband switches are being introduced into existing telecommunications networks, it would be beneficial to re-use or extend the life of existing switches (legacy switches) when combining narrowband networks with broadband transport mechanism being newly introduced. In fact, it would be beneficial to utilize existing legacy switches to enable a gradual migration from narrowband networks to broadband transport mechanism via the implementation of hybrid switches. In accordance with the teachings of the present invention, this is enabled by a first node (legacy switch) with existing call control functionalities and existing narrowband switch fabric (STM switch) linking with a second node (newly introduced broadband switch) wherein the call control functionalities within the first node is still used to control and provide the call control function over the second node. An example of combining narrowband and broadband transport mechanisms in a communication network could be an existing Ericsson STM switch (AXE-10) already installed and operating out in a live network pairing up with a newly introduced broadband switch (such as an ATM switch). Rather than redesigning and introducing brand new call control functionalities for the newly introduced ATM switch, the existing call control functionalities within the existing legacy switch is used to provide that function.

Accordingly, independent claim 1 recites the following limitations:

1. An arrangement for combining narrowband and broadband transport mechanisms in a communications network, comprising:

a first node, said first node configured to provide call control functions and connection control functions wherein said connection control functions are provided using a narrowband switch fabric; and

a second node, said second node connected to said first node by at least one link, said second node configured to provide connection control functions wherein said connection control function is provided using a broadband switch fabric, said second node adapted to rely on said first node for call control functions over said broadband switch fabric.

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As claimed, claim 1 requires a first node configured to provide call control functions as well as connection control functions. As further recited in claim 1, such connection control functions are provided using a narrowband switch fabric. Claim 1 further requires a second node connected to the first node over a link wherein the second node is further configured to provide connection control functions. However, unlike the first node, the connection control functions within the second node are provided using a broadband switch fabric. The second node further relies on the first node for call control functions to reuse and maximize the utility of the existing call control functions already existing within the first node.

The Applicant respectfully submits that none of the cited references, individually or in combination, renders the presently claimed invention anticipated or obvious.

For example, Christie merely shows a signaling processor (Fig. 2, 110) communicating with other devices within the telecommunication system 102. The Examiner incorrectly compared the signaling processor within Christie as the first node and the interworking unit (Fig. 2, 114) as the second node of the present invention. However, nothing in Christie discloses or teaches the signaling processor (first node) containing a narrowband switch fabric as well as the call control functions as recited by the presently pending claims. Furthermore, the Examiner's cited portion of Christie (Col. 7, lines 29-35) merely states that the "signaling processor 110 controls call routing and call processing in the telecommunication system 102." The Applicant agrees that a typical signaling processor within any telecommunication system would be tasked with providing call routing and call processing functionalities. However, there is nothing in Christie disclosing or teaching a first node (with both call control and call connection functionality) connected to a second node via a link wherein the second node relies on the first node for providing the call control functionalities. As further recited by independent Claim 1, the first node includes a narrowband switch fabric and the second node includes a broadband switch fabric. Nothing in Christie discloses or teaches such a hybrid arrangement for combining narrowband with broadband transport mechanism.

The Examiner further rejected Claims 18-21 as being anticipated by Christie et al (U.S.6,002,689). Using this reference, the Examiner incorrectly stated that the ISDN IW

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Unit (Fig. 3, 334) corresponded to the first node and that the Interworking Working Unit (Fig. 3, 204) corresponded to the second node of the present invention. The Applicant simply fails to understand how an interworking function unit used for formatting and changing different protocol formats can be used to disclose or teach the hybrid arrangement for combining the narrowband and broadband transport mechanism as currently claimed. For example, the Interworking function units of Christie fail to include any switch fabrics and call control functionalities as recited by the present invention. Even the portions of Christie cited by the Examiner (Col. 13, lines 32-42 and Col. 17, lines 22-30) merely state that various protocols are being converted by the interworking function to be compatible with the receiving device. Therefore, it simply fails to anticipate or render obvious the presently claimed invention. Notwithstanding the above, the Applicant has further amended independent Claim 11 to better claim the subject matter which the Applicant considers as his invention. A favorable reconsideration of the pending claims is respectfully submitted.

5.) Claim Rejections – 35 U.S.C. § 103 (a)

The Examiner rejected remaining independent claims 11, 22, and 26 with their respective dependent claims under 35 U.S.C. § 103(a) as being unpatentable over Christie et al (US 6,002,680) in view of Doshi et al. (US 5,483,527). For at least the same reasons as set forth above for Claim 18, the Applicant respectfully traverses the Examiner's rejections and further provides the following additional remarks.

As fully described above, Christie ('680) simply fails to disclose a first node having switching intelligence (call control functionalities) as well as a narrowband switch fabric. Furthermore, Christie ('680) similarly fails to disclose a second node having a broadband switch fabric and connected to the first node wherein the two nodes function as a single logical node. This is accomplished by the first node using its switching intelligence to provide the call control functionalities for the second node. The two mentioned devices (ISDN IW UNIT and Interworking Unit) in Christie are two IWU units for converting signaling formats and have nothing to do with the hybrid arrangement for

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combining narrowband and broadband transport mechanism as currently disclosed and claimed.

The Examiner's rejection using the Doshi reference is similarly incorrect. The Doshi invention basically discloses a terminal adapter for interfacing an ATM network with a STM network. Accordingly, a STM based Central Office (CO, Fig. 1, 25) communicates with an ATM switch (Fig. 1, 215) by interfacing with an STM/ATM Terminal Adapter (Fig. 1, 210). However, nothing in Doshi discloses a first node (such as the CO, 25 in Fig. 1) providing call control functionalities over a second node (such as the ATM Switch, 215 in Fig. 1). As a matter of facts, the broadband switch (ATM Switch 215) in Doshi already contains signaling processor (215-1) and call processor (215-2) functionalities internally and would not need to rely on the narrowband switch node (CO) to provide that functionalities. Accordingly, Doshi actually teaches away from the present invention by providing independent STM as well as ATM switches with internal call control functionalities contained therein.

Accordingly, the Applicant again submits that Christie, independently and in combination with Doshi, fails to anticipate or render obvious the present invention as claimed in independent Claim 11. For at least the same reasons as set forth above, the Applicant respectfully submits that remaining independent Claims 22 and 26 are similarly patentable over the cited references.

All other remaining claims are dependent on now allowable independent claims and a Notice of Allowance for all pending claims is earnestly requested.

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CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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